

REMARKS

In this paper, claim 14 is currently amended, and claim 24 has been added. After entry of the above amendment, claims 1-10 and 12-24 are pending, and claim 11 has been canceled.

Claims 1-5, 7-10, 12-13 and 23 were rejected under 35 U.S.C. §103(a) as being unpatentable over Schwaller (US 5,247,430) in view of admitted prior art. This basis for rejection is respectfully traversed.

Schwaller discloses a switching controller (1) that powers one or more lamps  $R_L$ ,  $V_{L1}$ ,  $V_{L2}$ , etc., wherein the power signal is pulsed to avoid overvoltage conditions. The signal is not pulsed to provide a control signal, so it cannot be called a composite control signal. The admitted prior art is: 1) It is known to construct bicycles that automatically change gears; and 2) It is known to combine power and control signals into a composite signal. No admission was made that it is known to combine power and control signals into a composite signal to operate a bicycle that automatically changes gears.

The office action concludes: 1) it would be obvious to incorporate a controller for automatically switching gears into Schwaller's system because it adds an extra feature that makes the bicycle be used more efficiently; and 2) it would be obvious to use composite signals to reduce the number of wires used around the bicycle. The issue then becomes: Where does Schwaller's switching controller (1) come into play? There are two possibilities: 1) The system proposed in the office action would use composite power/control signals to control shifting of the automatic bicycle transmission, and Schwaller's switching controller (1) would be used to "stabilize" the composite signal provided to the automatic bicycle transmission, or 2) A composite signal is provided to power Schwaller's lights  $V_L$ ,  $R_L$ . As for 1), it makes no sense to "stabilize" a composite signal provided to the automatic bicycle transmission because then the control signals would be smoothed over and destroyed, thereby making it impossible to control the automatic bicycle transmission. As for 2), there clearly is no suggestion or motivation anywhere in the prior art to power lamps  $V_L$ ,  $R_L$  using a composite power signal, because lamps have no use for the control portion of the signal. The office action identifies only one source of motivation to use composite power/control signals: To reduce

the number of wires used around the bicycle. However, such a reduction would occur only with components that use both power and control signals. Conventionally, such components require at least two wires, one for the power signal and one for the control signal. Using a composite signal allows such a component to be powered and controlled using a single wire. However, components that do not use control signals need only one wire to begin with - a power wire. Thus, there is no reason to power lamps  $V_L$ ,  $R_L$  with a composite signal to save wires because there are no wires to be saved. A single wire would be used with or without a composite signal. Thus, the prior art neither discloses nor suggests the subject matter recited in the claims.

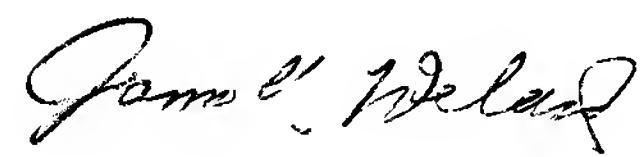
Claim 6 was rejected under 35 U.S.C. §103(a) as being unpatentable over Schwaller in view of admitted prior art and Gohda (US 4,609,982). This basis for rejection is respectfully traversed for the same reasons noted above.

Claims 14-19 were rejected under 35 U.S.C. §103(a) as being unpatentable over Schwaller in view of admitted prior art and Turner (US 2002/0014366). This basis for rejection is respectfully traversed for the same reasons noted above.

Claims 20-22 were rejected under 35 U.S.C. §103(a) as being unpatentable over Schwaller in view of admitted prior art, Turner and Gohda. This basis for rejection is respectfully traversed for the same reasons noted above.

Accordingly, it is believed that the rejections under 35 U.S.C. §103 have been overcome by the foregoing amendment and remarks, and it is submitted that the claims are in condition for allowance. Reconsideration of this application as amended is respectfully requested. Allowance of all claims is earnestly solicited.

Respectfully submitted,



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